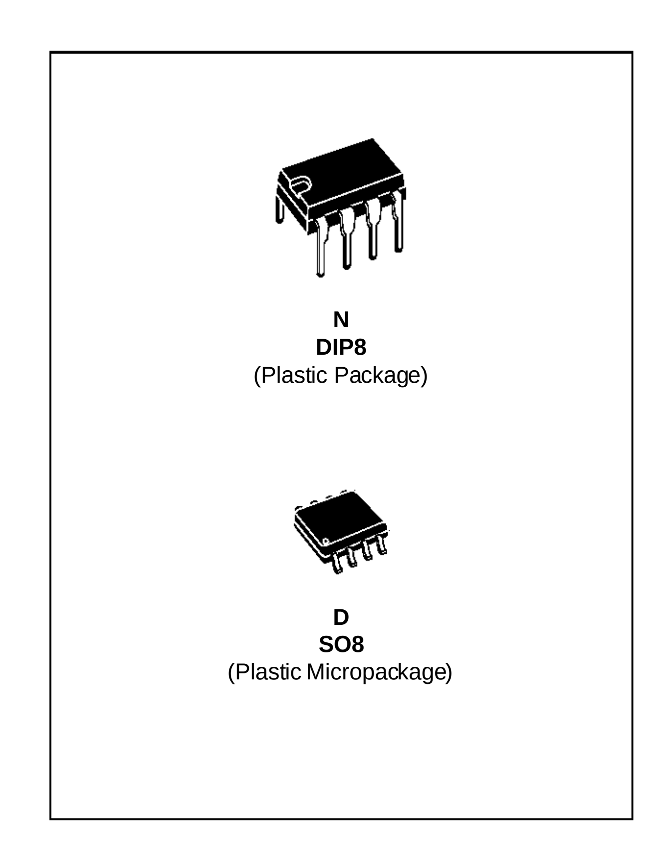


MC1403

2.5V PRECISION SERIALVOLTAGE REFERENCE

- OUTPUT VOLTAGE : 2.5V ±1%
- INPUT VOLTAGE RANGE : 4.5V to 40V
- QUIESCENT CURRENT : 1.2mA typ.
- OUTPUT CURRENT : 10mA



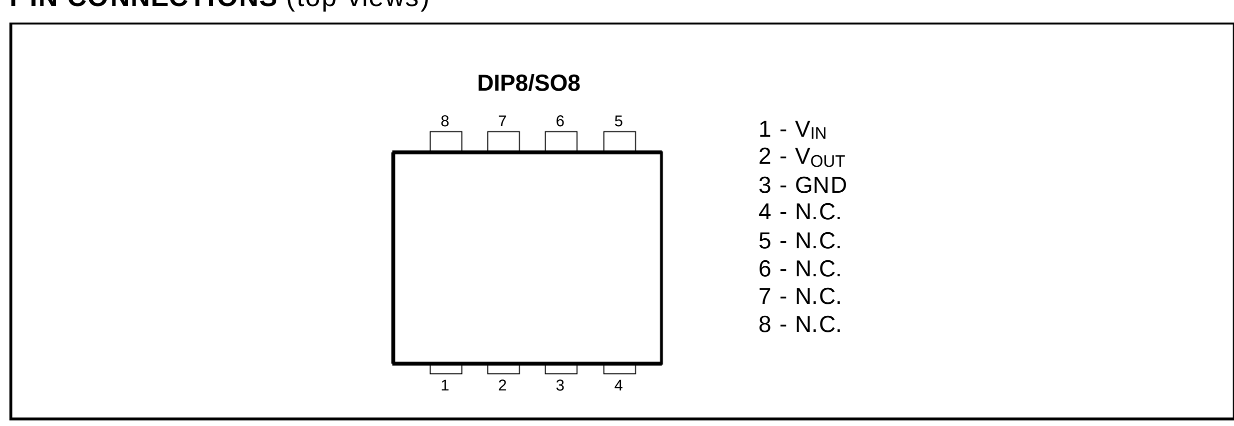
DESCRIPTION

The MC1403 is a serial 2.5V bandgap voltage reference. The major advantages are the 1% precision, the wide input voltage range (4.5V to 40V) and the low quiescent current (1.5mA max.)

ORDER CODES

Part number	Temperature Range	Package	
		N	D
MC1403	0°C, +70°C	•	•

PIN CONNECTIONS (top views)



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{IN}	Input Voltage	40	V
T_{oper}	Operating Free-air Temperature Range	0 to +70	^oC
T_{stg}	Storage Temperature Range	-65 to +150	^oC

OPERATING CONDITIONS

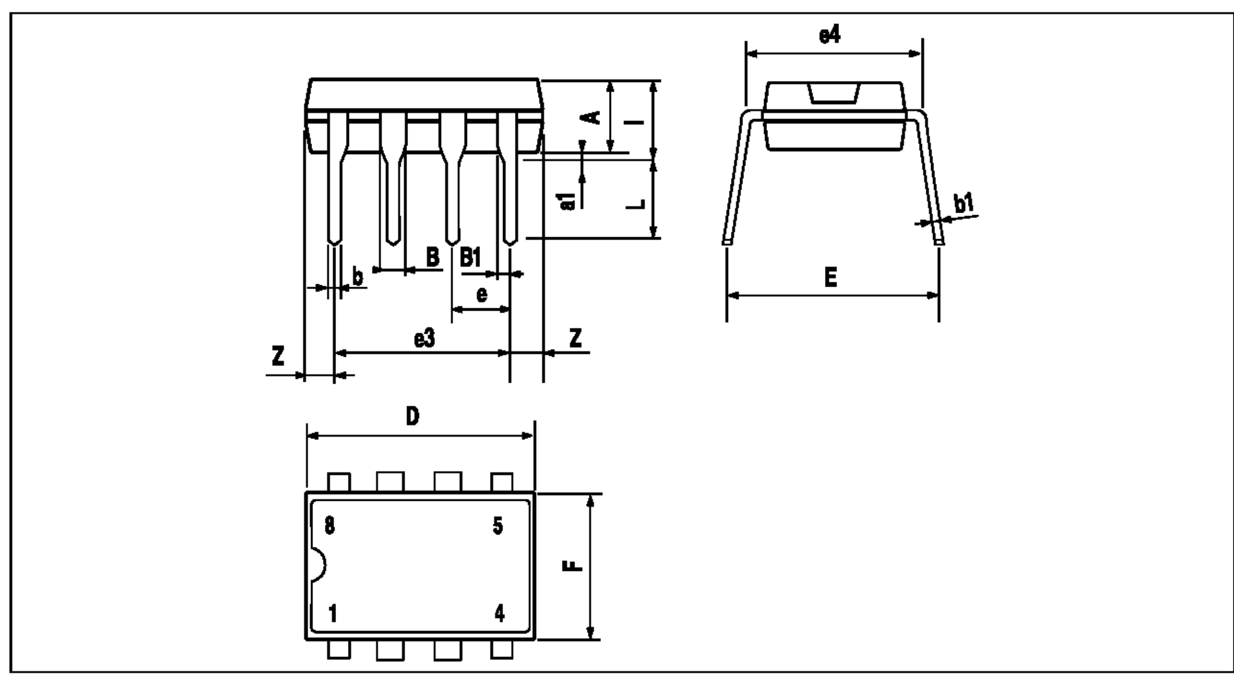
Symbol	Parameter	Value	Unit
V_{IN}	Input Voltage (I_o = 0mA)	4.5 to 40	V

ELECTRICAL CHARACTERISTICS

T_{amb} = 25^{o}C, V_{IN} = 15V (unless otherwise specified)

Symbol	Parameter	Value			Unit
		Min.	Typ.	Max.	
V_{OUT}	Output Voltage I_{OUT} = 0mA	2.475	2.5	2.525	V
$\frac{\Delta V_O}{\Delta T}$	Temperature Coefficient of Output Voltage I_{OUT} = 0mA		10	40	ppm/^{o}C
ΔV_O	Output Voltage change Over the Full Temperature Range I_{OUT} = 0mA		2	7	mV
Reg_{line}	Line Regulation I_{OUT} = 0mA, 4.5V $\leq V_i \leq$ 15V I_{OUT} = 0mA, 15V $\leq V_i \leq$ 40V			 3 4.5	mV
Reg_{load}	Load Regulation 0 $\leq I_{OUT} \leq$ 10mA			10	mV
I_Q	Quiescent Current I_{OUT} = 0mA		1.2	1.5	mA

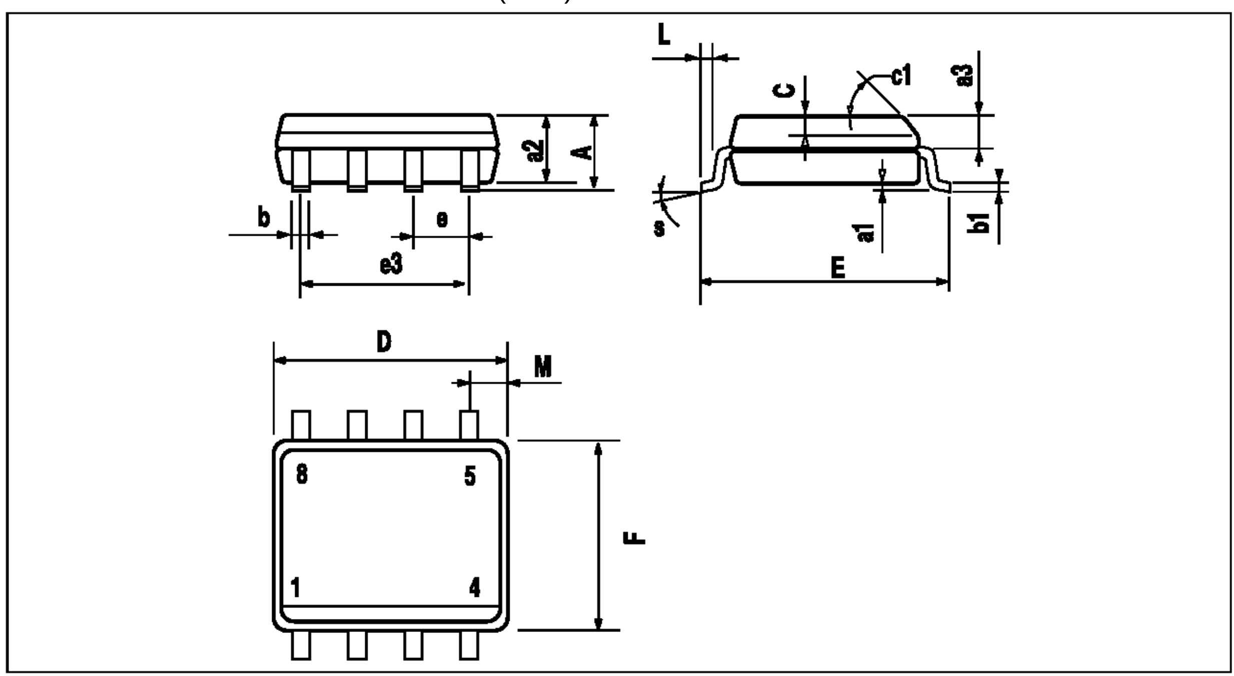
PACKAGE MECHANICAL DATA
8 PINS - PLASTIC DIP



Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A		3.32			0.131	
a1	0.51			0.020		
B	1.15		1.65	0.045		0.065
b	0.356		0.55	0.014		0.022
b1	0.204		0.304	0.008		0.012
D			10.92			0.430
E	7.95		9.75	0.313		0.384
e		2.54			0.100	
e3		7.62			0.300	
e4		7.62			0.300	
F			6.6			0260
i			5.08			0.200
L	3.18		3.81	0.125		0.150
Z			1.52			0.060

PACKAGE MECHANICAL DATA

8 PINS - PLASTIC MICROPACKAGE (SO8)



Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A			1.75			0.069
a1	0.1		0.25	0.004		0.010
a2			1.65			0.065
a3	0.65		0.85	0.026		0.033
b	0.35		0.48	0.014		0.019
b1	0.19		0.25	0.007		0.010
C	0.25		0.5	0.010		0.020
c1	45° (typ.)					
D	4.8		5.0	0.189		0.197
E	5.8		6.2	0.228		0.244
e		1.27			0.050	
e3		3.81			0.150	
F	3.8		4.0	0.150		0.157
L	0.4		1.27	0.016		0.050
M			0.6			0.024
S	8° (max.)					

